

**University of Jordan**  
**King Abdullah School of Information Technology**  
**Department of Computer Science**  
**Computer Skills II (Scientific Faculties) / Midterm Exam**

**Student Name:** \_\_\_\_\_ **Section No.:** \_\_\_\_\_  
**Student ID:** \_\_\_\_\_ **Instructor.:** \_\_\_\_\_

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**Note: Answer question 1 here.**

	Syntax Error	Correction
1	using name std ;	using namespace std ;
2	cin>>a,b;	cin>>a>>b;
3	max variable is undeclared	Add the following statement: int max;
4	cout<<" <u>Max</u> "<<max<<endl;	cout<<" <u>Max</u> "<<max<<endl;
5	for( <u>i</u> =0;i<5;i++)	for( <u>int i</u> =0;i<5;i++)
6	cout>>"Enter Integer Number:";	cout<<"Enter Integer Number:";
7	If(number%2=0)	If(number%2==0)
8	If(number%2=0); causes else statement being without if	if(number%2=0) [ remove ; from the end of if statement ]
9	<<number<<" Is Even"<< <u>end</u> ;	<<number<<" Is Even"<< <u>endl</u> ;
10	return 0;	It should be removed because of <u>void main()</u>

**Q1: Find and correct syntax error(s) in the following program.  
(10 points)**

```
#include <iostream>
using name std ;
void main ()
{
    int a,b;
    int number,x;
    double av;
    char z;

    cout<<"Enter Two Integer Number:";
    cin>>a,b;

    if(a>=b)
        max=a;
    else
        max=b;

    cout<<"Max="<<max<<endl;

    for( i=0;i<5;i++)
    {
        cout>>"Enter Integer Number:";
        cin>>number;
        if(number%2=0);
            cout<<"Number "<<number<<" Is Even"<<endl;
        else
            cout<<"Number "<<number<<" Is Odd"<<endl;
    }
    return 0;
}
```

Q2: What is the Output of the following Code Segments? (10 points)	
<pre> void main() {     int x , y; double z;     string str = "";     char w;      cin&gt;&gt;x&gt;&gt;z;     cin.get(w);     cin&gt;&gt;y;     getline(cin,str);      y += (str &gt; "GOOD" ? 20 : 50);     cout&lt;&lt;"x is:"&lt;&lt;x&lt;&lt;"\n"&lt;&lt;"y is:"&lt;&lt;y&lt;&lt;"\n"         &lt;&lt;"z is:"&lt;&lt;z&lt;&lt;"\n"&lt;&lt;"w is:"&lt;&lt;w&lt;&lt;"\n"         &lt;&lt;"str is:"&lt;&lt;str&lt;&lt;"\n"; } </pre>	<u>Assume the input as follows:</u>
	56 13.9 29 Good
	<u>Stored Value For Each Variable</u>
	x = 56 y = 79 z = 13.9 w = space str = Empty String
<pre> void main() {     int k1 = 14 , k2 = 6 ;     cout&lt;&lt;k2--&lt;&lt;" "&lt;&lt;k1&lt;&lt;"\n";     while( k1 &gt; 11 )     {         switch( k1 ) {             case 14:                 k1++;             case 13:                 cout&lt;&lt;(k2 % 5)&lt;&lt;" ";             case 12:                 cout&lt;&lt;++k2&lt;&lt;" ";                 break;             default:                 k2 += k1/2;                 break;         }         cout&lt;&lt;k1&lt;&lt;"\n";         k1 -= 5; } } </pre>	<u>Output</u>
	6 14 0 6 15

**Q3: Write a C++ code to read a group of integer values and calculate the average of only even ones. The input should terminate at the time of input for a negative integer. (5 points)**

```
#include<iostream>
using namespace std;
void main()
{
```

```
#include<iostream>
using namespace std;
void main()
{
```

```
    int val, counter = 0;
    double sum = 0 , avg;
```

→ 1 mark

```
    cout<<"Enter a value: ";
    cin>>val;
```

→ 1 mark

```
    while(val >= 0) → 1 mark
```

```
    {
        if(val%2 == 0){
            sum += val;
            counter++;
```

→ 1 mark

```
        }
        cout<<"Enter a value: ";
        cin>>val;
```

→ 1 mark

```
    }
    if(counter != 0)
    {
        avg = sum / counter;
        cout<<avg<<"\n";
    }
}
```

→ 1 mark

**Q4: Write a C++ code to input an integer value (assume its name is N) and calculate the summation for the first N terms of the following series: (Note: Don't use Pow function in your solution) (5 points)**

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$$1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \dots$$

```
#include<iostream>
```

```
using namespace std;
```

```
void main()
```

```
{
```

```
double sum = 0;
```

```
int N, x = 1;
```

→1 mark

```
cout<<"Enter Number of terms:";
```

```
cin>>N;
```

→1 mark

```
for(int i = 1; i <= N ; i++)
```

→1 mark

```
{
```

```
sum += 1 / x;
```

```
x *= 2;
```

→1 mark

```
}
```

```
cout<<sum<<"\n";
```

→1 mark

```
}
```